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**Mask inspecting and repairing appts. for semiconductor microcircuit -
uses controlled current of electron beam to scan radiation-sensitive
layers of mask surface, and detects secondary electrons**

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Number of Countries: 006 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 334680	A	19890927	EP 89303016	A	19890328	198939 B
JP 1244461	A	19890928	JP 8869759	A	19880325	198945
JP 1244462	A	19890928				198945
✓ US 4906326	A	19900306	US 89328459	A	19890324	199016
✓ EP 334680	B1	19950802	EP 89303016	A	19890328	199535
✓ DE 68923638	E	19950907	DE 623638	A	19890328	199541
			EP 89303016	A	19890328	

Priority Applications (No Type Date): JP 8869759 A 19880325; JP 8869758 A
19880325

Cited Patents: 2.Jnl.Ref; A3...9106; JP 55068632; JP 62215957; No-SR.Pub

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 334680	A	E	13		
Designated States (Regional): DE FR GB NL					
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Designated States (Regional): DE FR GB NL					
DE 68923638	E			G03F-001/00	Based on patent EP 334680

Abstract (Basic): EP 334680 A

The mask inspecting and repairing appts. uses a controlled current of electron beam. For inspection, the surface of a mask (4) having a mask pattern (3) and a radiation-sensitive layer (5), covering it, is scanned with an electron beam (6). By detecting (7) secondary electrons or reflected electrons caused at that time, the state of the pattern is inspected.

If any defect is detected (12-15), the portion of the radiation-sensitive layer on the detected defect is irradiated with an electron beam of greater magnitude than that for the inspection and, thereafter, the exposed portion of the radiation-sensitive layer is removed. Then etching or plating is made to the thus uncovered portion, and repair of the mask pattern is made.

ADVANTAGE - Efficient, does not damage mask.

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Title Terms: MASK; INSPECT; REPAIR; APPARATUS; SEMICONDUCTOR; MICROCIRCUIT;
CONTROL; CURRENT; ELECTRON; BEAM; SCAN; RADIATE; SENSITIVE; LAYER; MASK;
SURFACE; DETECT; SECONDARY; ELECTRON

Derwent Class: P42; P73; P78; P84; U11

International Patent Class (Main): G03F-001/00

International Patent Class (Additional): B05D-005/00; B32B-035/00;

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